

Please provide the following information, and submit to the NOAA DM Plan Repository.

Reference to Master DM Plan (if applicable)

As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

1. General Description of Data to be Managed**1.1. Name of the Data, data collection Project, or data-producing Program:**

Sex control experiments - Development of methods to sterilize sablefish

1.2. Summary description of the data:

Methods for reproductive sterilization are broadly needed in marine aquaculture due to biosafety concerns associated with escapement of farmed fish and potential genetic contamination of wild stocks. Current methods for sterilization have been primarily tested in freshwater fishes and are often ineffective, particularly in males. The proposed activity builds upon our recent success in producing the first-ever monosex female stocks of sablefish for aquaculture and seeks to develop eco-friendly, non-GMO methods for reproductive sterilization. We will use sablefish as our model marine species for sterilization and continue to collaborate with University of Maryland faculty with expertise in cutting-edge techniques for sterilization. Development of sustainable marine aquaculture is a high priority at the local (NWFSC), regional (WCR), and national levels (NOAA, DOC, Congress). Our sablefish sex control/sterilization project was also highlighted as a critical priority and outstanding area of research in the NOAA Aquaculture Science Review published 28 Feb 2019. We ultimately aim to transfer a sterilization technology to the US sablefish aquaculture industry and expand our methodology to other important species, with the goal of improving sustainability of marine aquaculture and mitigating impacts on the environment.

In these experiments sablefish sex ratio data are collected using gonadal histology and a genetic sex marker.

1.3. Is this a one-time data collection, or an ongoing series of measurements?

Ongoing series of measurements

1.4. Actual or planned temporal coverage of the data:

2010-05-01 to Present, 2010-05-01 to Present

1.5. Actual or planned geographic coverage of the data:

W: -122.3062, E: -122.3062, N: 47.6449, S: 47.6449

Northwest Fisheries Science Center: Montlake lab

W: -122.5547, E: -122.5547, N: 47.569, S: 47.569
Manchester Research Station: Manchester lab

1.6. Type(s) of data:

(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
Table (digital)

1.7. Data collection method(s):

(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)

Instrument: Video Camera

Platform: Platform Not Applicable

Physical Collection / Fishing Gear: Not Applicable

1.8. If data are from a NOAA Observing System of Record, indicate name of system:**1.8.1. If data are from another observing system, please specify:****2. Point of Contact for this Data Management Plan (author or maintainer)****2.1. Name:**

Northwest Fisheries Science Center (NWFSC)

2.2. Title:

Metadata Contact

2.3. Affiliation or facility:

Northwest Fisheries Science Center (NWFSC)

2.4. E-mail address:

nmfs.nwfsc.metadata@noaa.gov

2.5. Phone number:

206-860-3200

3. Responsible Party for Data Management

Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.

3.1. Name:

Adam Luckenbach

3.2. Title:

Data Steward

4. Resources

Programs must identify resources within their own budget for managing the data they produce.

4.1. Have resources for management of these data been identified?

No

4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):

1

5. Data Lineage and Quality

NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.

5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible

(describe or provide URL of description):

Lineage Statement:

Tissue sections and genetic marker results analyzed by researchers and notes typically recorded in spreadsheet on sex and stage of gonads.

5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:

5.2. Quality control procedures employed (describe or provide URL of description):

Slides and gel images viewed blind to treatment to avoid bias.

6. Data Documentation

The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.

6.1. Does metadata comply with EDMC Data Documentation directive?

Yes

6.1.1. If metadata are non-existent or non-compliant, please explain:

6.2. Name of organization or facility providing metadata hosting:

NMFS Office of Science and Technology

6.2.1. If service is needed for metadata hosting, please indicate:

6.3. URL of metadata folder or data catalog, if known:

<https://www.fisheries.noaa.gov/inport/item/17986>

6.4. Process for producing and maintaining metadata

Metadata produced and maintained in accordance with the NOAA Data Documentation
Procedural Directive: [https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-
Data_Documentation_v1.pdf](https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.pdf)

NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.

Yes

7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:

Northwest Fisheries Science Center (NWFSC)

Yes

https://www.webapps.nwfsc.noaa.gov/apex/parr/sablefish_sex_differentiation_sample_data/data/page/
https://www.webapps.nwfsc.noaa.gov/apex/parrdata/inventory/tables/table/sablefish_sex_differentiation_sample_data/data/page/
https://www.webapps.nwfsc.noaa.gov/apex/parr/sablefish_sex_differentiation_sampling/data/page/
https://www.webapps.nwfsc.noaa.gov/apex/parrdata/inventory/tables/table/sablefish_sex_differentiation_sampling/data/page/

At this time, contact the Data Manager for information on obtaining access to this data set. In the near future, the NWFSC will strive to provide all data resources as a web service in order to meet the NOAA Data Access Policy Directive (<https://nosc.noaa.gov/EDMC/PD.DA.php>).

0 days

7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:

No Delay

8. Data Preservation and Protection

The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

8.1. Actual or planned long-term data archive location:

(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)

NCEI-MD

8.1.1. If World Data Center or Other, specify:

8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:

8.2. Data storage facility prior to being sent to an archive facility (if any):

Northwest Fisheries Science Center - Seattle, WA

8.3. Approximate delay between data collection and submission to an archive facility:

365

8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection

The Northwest Fisheries Science Center facilitates backup and recovery of all data and IT components which are managed by IT Operations through the capture of static (point-in-time) backup data to physical media. Once data is captured to physical media (every 1-3 days), a duplicate is made and routinely (weekly) transported to an offsite archive facility where it is maintained throughout the data's applicable life-cycle.

9. Additional Line Office or Staff Office Questions

Line and Staff Offices may extend this template by inserting additional questions in this section.